TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1904.

No. 275.

THE UNITED STATES, APPELLANT,

vs.

THE HARVEY STEEL COMPANY.

APPEAL FROM THE COURT OF CLAIMS.

FILED MAY 25, 1904.

(19373.)

1 In the Court of Claims.

HARVEY STEEL COMPANY
v.
THE UNITED STATES. } No. 21110.

I.—*Communication of the Secretary of the Navy referring claim. Filed June 23, 1898.*

NAVY DEPARTMENT,
Washington, June 22, 1898.

SIR: I have the honor to transmit herewith, in pursuance of the provisions of section 1063 of the Revised Statutes, a number of papers described upon the accompanying schedule, relating to claim of the Harvey Steel Company for certain royalties under two contracts entered into with this Department, and dated, respectively, March 21, 1892, and April 12, 1893. The purpose of transmitting these papers is that this claim of the Harvey Company may receive trial and adjudication by the court, as provided by the statute cited.

Any further information afforded by the files and records of this Department in relation to the claim referred to will be promptly furnished upon call of the court.

Very respectfully,

JOHN D. LONG,
Secretary.

The CHIEF CLERK,
Court of Claims.

2 In the Court of Claims of the United States.

HARVEY STEEL COMPANY
vs.
THE UNITED STATES. } No. 21110.

II—*Petition. Filed December 3, 1898.*

To the Chief Justice and Judges of the Court of Claims:

The petition of Harvey Steel Company respectfully represents that said Harvey Steel Company at all times hereinafter mentioned was and now is a corporation created, organized, and existing under and by virtue of the laws of the State of New Jersey, and having its principal place of business in said State, and at all times it was, and still is, a citizen of the United States.

II. That in and by the endeavors and ingenuity of the late Hayward A. Harvey, now deceased, former president of the petitioner, the petitioner developed and introduced to the notice of the United States and its officers, especially those connected with the Navy Department thereof, certain decrementally hardened armor plates and a certain process for the treatment of armor plates and manufacturing the same, and was at great expense in connection therewith, and said process became widely known, as practiced under the direction of the petitioner, as the Harvey process for the treatment of armor plates, or as the process of "harveying" or

"harveyizing" or "harvey treating" armor plates, and such armor plates as "harveyed" or "harveyized" armor plates.

III. That on September 29th, 1891, letters-patent of the United
3 States were granted to the said Hayward A. Harvey, now deceased, late of Orange, New Jersey, for or in connection with said process, and said letters-patent were duly issued by the United States bearing date the said 29th day of September, 1891, and were numbered No. 460262, and since the date of said letters-patent the petitioner has acquired the right to use certain improvements in the composition for treating armor plates in the application of said Harvey process, and has reduced the same to practice and obtained letters-patent for the same.

IV. By written assignment, dated October 7, 1891, duly made and executed by the said Hayward A. Harvey, and recorded October 9th, 1891, in Liber C 45, page 291, of Transfers of Patents, in the Patent Office of the United States, the said Harvey Steel Company became and has thereafter continued to be and now is the owner of all and singular the patented rights in and to said process known as the Harvey process for the treatment of armor plates for use in the construction of vessels, as set forth in said letters patent of the United States, No. 460262, dated September 29th, 1891; and has also, by written assignment duly made and executed by said Hayward A. Harvey, become possessed of and now is the owner of all and singular other improvements and patents for the same, devised by the said Hayward A. Harvey, as aforesaid.

V. That the petitioner, being the owner of the said process and of the right to use and practise the same, and of the said letters patent relating thereto, introduced the same to the notice of the United States and particularly to the Navy Department thereof, and instituted numerous tests for exhibiting and demonstrating the efficiency of said process and its value in the treatment of armor plates.

4 VI. Thereupon, on the 21st day of March, 1892, certain written agreements were made and entered into between the petitioner and the Government of the United States, represented by the Secretary of the Navy, a copy of which is hereto annexed and marked "Exhibit A," by which the said United States agreed to supply armor plate manufactured or treated under the said Harvey process to certain vessels of war mentioned therein.

VII. That thereafter additional trial armor plates, treated in accordance with said Harvey process, were subjected to numerous experimental tests by the petitioner and by the officers and agents of the United States and of the Navy Department thereof, which demonstrated the beneficial results obtained from the application of the said Harvey process, and thereupon, on the 8th day of October, 1892, the said Harvey process was definitely adopted by the Navy Department, in accordance with the following letter:

"BUREAU OF ORDNANCE,
"NAVY DEPARTMENT,
"*Washington, D. C., October 8, 1892.*

"HARVEY STEEL CO.:

"SIRS: Your letter of the 29th ult., addressed to the honorable Secretary of the Navy, has been referred to this Bureau, which has cognizance of the matter.

"You are informed that the Harvey process for armor plates has been definitely adopted by the Navy Department.

"Respectfully,

"WM. M. FOLGER,
"*Chief of Bureau.*"

That thereupon the Government of the United States entered into an agreement with the Bethlehem Iron Company, of Bethlehem, Pa., for the treatment according to said Harvey process of armor plates for certain vessels of war, the application of said process to be under the direction of said Government of the United States, and the said Bethlehem Iron Company entered upon the performance of its said agreement.

VIII. On or about the 12th day of April, 1893, the United States, and the Navy Department thereof, being desirous of extending
5 their right to use the said Harvey process on all vessels it might thereafter build, and of making a new contract for a more extended use of the said process, said Harvey Steel Company, as party of the first part, entered into a contract in writing with the United States, as party of the second part, represented by Hilary A. Herbert, as Secretary of the Navy, a copy of which contract is annexed hereto and marked "Exhibit B," and made a part of this petition. By said last-mentioned contract it was agreed, among other things, that the party of the second part might, upon the terms therein stated, use and employ in the treatment of armor plates manufactured or to be manufactured for all naval vessels, the construction of which was authorized by Congress up to and including July 19, 1892, said Harvey process, and might use and employ the armor plates manufactured for such vessels according to said process, paying therefor to the party of the first part as royalty the sum of $96,056.46 (it being understood, however, that ten per cent of the said sum should be withheld by the party of the second part until, upon the receipt of the formulæ for the compounds used and employed in the application of the Harvey process, said process should be used and found to be efficient, and, in the judgment of the Secretary of the Navy, of satisfactory value).

And it was further agreed, in and by said contract of April 12, 1893, that the party of the second part, the said United States, should not only have the right to use and employ the aforesaid Harvey process in the treatment of armor plates for vessels which, at the date of said contract, had been authorized by Congress since the 19th day of July, 1892, but also for vessels which might after the date of said contract be authorized by Congress, and to use and employ armor plates for such vessels manufactured according to said process, paying therefore to the party
6 of the first part of royalty of one-half of one cent per pound of the finished plate.

IX. Said Harvey Steel Company, the petitioner, has furnished to the said party of the second part the formulæ for the compounds used and employed in the application of the Harvey process, and has furnished full and complete information regarding the composition of the compounds employed in the Harvey process and the application of the same, and has imparted to the party of the second part all information concerning any and all improvements which said party of the first part has

at any time made in or upon said process, and has in all other respects fully kept and performed all of the conditions of said contract dated April 12, 1893, on its part to be performed, and the said process has been tried by the said United States and has been found to be efficient, and, in the judgment of the Secretary of the Navy, of satisfactory value, and the petitioner accordingly requested payment of said reserved ten per cent, and the same was approved by an official communication, dated December 4, 1893, of which the following is a copy:

"BUREAU OF ORDNANCE,
"NAVY DEPARTMENT,
"*Washington City, December 4, 1893.*

"SIR. Referring to the Bureau's endorsement of the 28th of September on the letter of September 16th from the Harvey Steel Company, requesting payment of the reservation withheld under the agreement with that company of April 12th, 1893.

"1. The first Harvey-treated plate under the said agreement having been tested, with results demonstrating the satisfactory value and efficiency of the process, and a part of the 'Maine's' side armor having been set up in the shops and found to be satisfactory, there being no important irregularities due to the application of the process, it is recommended that the reservation referred to be now paid.

"2. Vouchers covering said reservation are submitted herewith.

"Respectfully,

"W. T. SAMPSON,
"*Chief of Bureau of Ordnance.*

"To the Honorable
"The SECRETARY OF THE NAVY."

7 X. Said Harvey process as set forth in said contract dated April 12, 1903 (Exhibit B), was used and employed in the treatment of armor plates, manufactured for naval vessels the construction of which was authorized by Congress up to and including July 19, 1892, including the plate mentioned in said letter of the Chief of the Bureau of Ordnance dated December 4, 1893, and said United States used and employed the armor plates for said vessels manufactured according to said process as aforesaid, and has paid the sum of $96,056.46 as royalty upon the Harvey armor used for said vessels, the construction of which was authorized by Congress up to and including July 9, 1892, and has paid the said ten per cent reserved therefrom by order of the Secretary of the Navy, in accordance with said communication of December 4, 1893.

XI. By act approved March 2nd, 1895, Congress authorized the construction of two battleships for the United States Navy, which were known, respectively, as "No. 5" and "No. 6," and subsequently named the "Kearsarge" and "Kentucky."

XII. On or about the 15th day of April, 1896, the United States, by the Secretary of the Navy, issued an advertisement dated on that day inviting proposals for nickel-steel armor plates for the armor of said battleships, to wit, the "Kearsarge" and the "Kentucky," and stated in said advertisement as follows:

"Bids are hereby invited for supplying the following-named material:
"About 6,000 tons, more or less, or nickel-steel armor, to be of the best material and domestic manufacture, part of which, as shown by the specifications, will be required to be treated by a process of supercarbonization known as the Harvey process."

Said advertisement further stated:

8 "The prices paid for armor treated by the Harvey process must not include anything for royalties, as the Department has acquired the right to use said process and will indemnify the contractor against all claims therefor."

The specifications referred to in said advertisement as aforesaid were contained in a printed circular approved by the Secretary of the Navy April 14th, 1896, which said specifications and circular in the schedule of armor required for each vessel designated the following plates to be "Harveyed:"

U. S. battleship "Kearsarge:"
Exhibit 1, side armor, 34 plates.
Exhibit 2, 13-inch, B. L. R. turrets, 12 plates.
Exhibit 3, 13-inch, B. L. R. barbettes, 22 plates.
Exhibit 4, 8-inch, B. L. R. turrets, 6 plates.
Exhibit 5, superstructure armor, 26 plates.
Exhibit 6, casemate armor, 26 plates.
Exhibit 7, conning tower, 2 plates.

U. S. battleship "Kentucky:"
Exhibit 1, side armor, 34 plates.
Exhibit 2, 13-inch, B. L. R. turrets, 12 plates.
Exhibit 3, 13-inch, B. L. R. barbettes, 22 plates.
Exhibit 4, 8-inch, B. L. R. turrets, 6 plates.
Exhibit 5, superstructure armor, 26 plates.
Exhibit 6, casemate armor, 26 plates.
Exhibit 7, conning tower, 2 plates.

XIII. On or about the 1st day of June, 1896, said United States, by the Secretary of the Navy, entered into two separate contracts dated on that day, one with the Bethlehem Iron Company and the other with the Carnegie Steel Company (Limited) to furnish, each in certain proportions, the armor described in said advertisement and said circular including therein the Harveyed armor aforesaid.

9 A copy of said contract, or the material parts thereof, between said United States and said The Carnegie Steel Company (Limited) is annexed hereto marked "Exhibit C" and made part of this petition. Said contract between said United States and said Bethlehem Iron Company was identical with said Exhibit C in all its provisions except as to the detailed schedule containing the number and description of Harveyed and other armor plates to be furnished thereunder.

XIV. As your petitioner is informed and believes, said contractors, Bethlehem Iron Company and The Carnegie Steel Company (Limited), have, since the date of said contracts, furnished to the said United States in pursuance of the provisions of said contracts, the armor designated in said contracts and in said advertisement and circular, or the principal part thereof amounting to fifty-five hundred (5500) tons of finished plates of said Harveyed armor called for by said contracts, and

said Harveyed armor has been received and accepted by said United States, and payments made therefor in accordance with said contracts, and said Harveyed armor has been and is used and employed by said United States for said vessels. In the manufacture of said Harveyed armor so furnished, accepted, used and employed as aforesaid, the same process, known as the Harvey process, was used and employed, which was exhibited to the Government of the United States and the Navy Department, as set forth in Paragraph V of this petition, and which formed the basis of the agreement (Exhibit A) and which was adopted by the Navy Department as set forth in Paragraph VII hereof, and which was referred to in said contract dated April 12, 1893 (Exhibit B), and which was used and employed and known as such at the date of said contract; and said Harvey process, so used and employed as aforesaid, in making said fifty-five hundred (5500) tons, was the same as was used and employed in the treatment and manufacture of the
10 armor plates referred to in the paragraph numbered X of this petition, and on which the royalty was paid as therein stated.

XV. Your petitioner has repeatedly applied to the Secretary of the Navy for an accounting of the royalties for said Harveyed armor furnished under said contracts and for payment thereon as provided by said contract dated April 12, 1893, but said Secretary has neglected and refused to pay the same, and on or about the 22nd day of June, 1898, referred the papers in this claim to this court, under the provisions of section 1063 of the Revised Statutes, as appears by letter dated June 22, 1898, a copy of which is annexed hereto, marked "Exhibit D," and made a part of this petition.

XVI. There is now due and owing from the said United States to said Harvey Steel Company under said agreement of April 12, 1893, as royalties for Harveyed armor used for said battleships "Kearsarge" and "Kentucky" the sum of $61,600.00, no part of which has been paid.

Your petitioner therefore prays the court that judgment may be rendered in its favor for the sum of $61,600.00.

HARVEY STEEL COMPANY,
(Sgd.) By S. S. PALMER,
President, Petitioner.

TRACY, BOARDMAN & PLATT,
Attorneys for Petitioner.

11 UNITED STATES OF AMERICA,
Southern District of New York,
State and County of New York, ss:

Personally appeared before me, notary public duly commissioned and appointed, S. S. Palmer, who, being duly sworn, deposes and says: That he is the president of the petitioner named in the foregoing petition and that his genuine signature is thereunto subscribed; that no assignment or transfer of the claim therein mentioned, or any part thereof, or any interest therein, has been made except as in said petition stated; and that said claimant is justly entitled to the amount therein claimed from the United States after allowing all just credits and offsets; and that deponent believes the facts as stated in said petition are true.

(Sgd.) S. S. PALMER.

Subscribed and sworn to before me in the county, State, and district aforesaid this 1st day of December, 1898.

[L. S.] F. STORRS HANSELL,
Notary Public 201, N. Y. Co.

Petitioner's address, Newark, New Jersey.

Attorneys' address, Tracy, Boardman & Platt, 35 Wall street, New York, N. Y.

12 EXHIBIT A.

Memorandum of an agreement of two parts, made and entered into this twenty-first day of March, A. D. 1892, by and between the Harvey Steel Company, a corporation created under the laws of the State of New Jersey, and doing business in said State, represented by the president of said corporation, of the one part (hereinafter called the party of the first part), and the United States, represented by the Secretary of the Navy, of the other part (hereinafter called the party of the second part).

Whereas the party of the first part is the owner of all and singular the patented rights in and to a certain process, known as the "Harvey process," for the treatment of armor plate for use in the construction of vessels; and

Whereas the parties have agreed and do hereby agree that, upon the terms hereinafter stated, armor plate manufactured or treated under the said "Harvey process" shall, so far as possible, be supplied to such of the following-described naval vessels as the Department may from time to time designate, to wit:

Cruiser No. 6, "Amphitrite."
Cruiser No. 7, "Monadnock."
Cruiser No. 8, "Terror."
Cruiser No. 9, "Texas."
Cruiser No. 10, "Maine."
Cruiser No. 11, "Monterey."
Cruiser No. 12, "New York."
Cruiser No. 13, "Indiana."
Gunboat No. 5, "Massachusetts."
Gunboat No. 6, "Oregon."
"Puritan," ram.

Whereas the said Harvey Steel Company, under date of March 3, 1891, in a communication signed by B. G. Clark, president, H. A. Harvey, general manager, and Theodore Sturges, treasurer, agreed to give the Navy Department the option of purchasing the right to use and employ the "Harvey process" for treating armor plates, as follows:

13 "We hereby agree to give to the Naval Department an option for the purchase of the application of the Harvey process for treating armor plates which was tested at the Naval Ordnance Proving Ground, Annapolis, Md., February 14, 1891, on the following terms, viz:

"In the event of the process proving of value, after further tests, and upon the demand by the Naval Department for its application to armor

plating, the sum of $75,000 is to be paid by the latter to the Harvey Steel Company as royalty therefor, and, as utilized, at the rate of one-half (½) of one (1) cent per pound of the weight of the finished plate. This royalty of one-half (½) of one (1) cent per pound is to cease when the said sum of $75,000 has been paid.

"The Navy Department is to have the right to use the process, should it so desire, without further compensation, upon all armor plating which is to be applied to vessels, the construction of which is authorized by Congress at this date. In the event of the authorization by Congress of the construction of other vessels of war than those above mentioned, a new contract for the further application of the Harvey process of treating armor plates is to be made between the Naval Department and the latter, should the Department so desire.

"It is understood that the Naval Department will undertake to bear all the expense of the experimental development of the process as applied to armor plates, our Mr. Harvey to furnish, in consultation with the Bureau of Ordnance, all details at present in his possession in regard to the process, or which he may personally *develop in the perfection of his* methods of treatment as applied to armor plating."

Whereas the Navy Department, under date of March 3, 1891, in a communication signed by Wm. M. Folger, Chief of the Bureau of Ordnance, accepted the terms of the offer of the Harvey Steel Company, as stated in the communication above mentioned, and by this agreement does accept the option offered by the party of the first part in the first paragraph of said communication; and

Whereas the party of the second part has agreed and does hereby agree to also pay, as hereinafter set forth, the expense of applying said process in the manufacture or treatment of said armor plate:

Now, therefore, it is mutually understood, covenanted, and agreed by and between the parties hereto that the party of the second part, upon the terms herein stated, may use and employ, in the treatment of armor plate manufactured or to be manufactured for naval vessels, as
14 hereinbefore stated, the hereinbefore-mentioned process known as the "Harvey process."

The party of the first part, in consideration of the premises, and provided the said process of treating said armor plate shall be conducted at the Bethlehem Iron Works, at South Bethlehem, Pennsylvania, or elsewhere, under the direction of the party of the first part, hereby guarantees that, in addition to the hereinbefore-mentioned royalty of one-half of one cent per pound, to be paid by the party of the second part to the party of the first part upon armor for vessels which have been authorized by Congress up to March 3, 1891, the additional cost to the party of the second part of applying the Harvey process, hereinbefore referred to, to the armor plate as aforesaid shall, during the period of one year from the date hereof, be nine-tenths of one cent ($0.009) per pound of the finished plate, and that after the expiration of the period of one year from the date hereof the said additional cost to the party of the second part shall not exceed nine-tenths of one cent per pound of the finished plate; and in case it shall be found that the actual cost of the application of the said process to the armor plate shall have been diminished during one year from the date hereof, then the said additional cost to the party of the second part

shall thereafter be equal to the said actual cost of the application of such treatment to the armor plate plus one-half (½) the difference between said actual cost of application and the sum of nine-tenths of one cent ($0.009) per pound of the finished plate.

The party of the first part hereby further covenants and agrees that it will hold and save harmless and, at its own expense, defend the United States from and against all and every demand or demands for or
15 on account of the use and employment of the "Harvey process" above mentioned in the manufacture and treatment of armor, and from all and every demand or demands which shall hereafter be made for the payment of any sum or sums of money in excess of the aforesaid cost for royalty and treatment of armor under said process, to be paid as hereinbefore specified and provided for in this contract.

Finally, it is hereby mutually understood, covenanted, and agreed by and between the parties hereto that the party of the second part shall render to the party of the first part quarterly reports of all armor plate manufactured or treated under the said Harvey process, which the party of the second part shall have received during the three months next preceding the dates of such reports, respectively, and within a period of thirty days after the rendition of each of said quarterly reports the party of the second part shall pay to the party of the first part such sum of money as may be required to cover the said royalty of one-half of one cent per pound, and also the cost of treatment by the said Harvey process of the armor plate which shall have been received by the party of the second part during the three months next preceding the commencement of said period of thirty days, it being hereby understood and agreed that the first of the said quarterly reports shall be rendered on or before the first day of May, 1892, and shall be thereafter rendered every three months until all the armor treated for vessels authorized by Congress to March 3, 1891, shall have been received by the party of the second part.

In witness whereof the respective parties hereto have hereunto
16 set their hands seals the day and year first above writtten.

THE HARVEY STEEL COMPANY,
By B. G. CLARK, *Pres.*
THE UNITED STATES,
By B. F. TRACY,
As Secretary of the Navy. [SEAL.]

Signed and sealed in presence of—
Attest:
[SEAL.] L. L. STURGES, *Sec'y pro tem.*
WM. B. REMEY, *Judge-Advocate-General,*
as to B. F. Tracy, *Secretary of the Navy.*

17 EXHIBIT B.

Memorandum of an agreement, of two parts, made and entered into this twelfth day of April, A. D. 1893, by and between the Harvey Steel Company, a corporation created under the laws of the State of New Jersey, and doing business in said State, represented by the president of said corporation, of the one part (hereinafter called the party of the first part), and the United States, represented by the Secretary of the Navy, of the other part (hereinafter called the party of the second part).

Whereas the party of the first part is the owner of all and singular the patented rights in and to a certain process, known as the Harvey process, for the treatment of armor plates for use in the construction of vessels, and of the exclusive right to the use and employment of armor plates manufactured according to said process, as particularly set forth in letters patent of the United States No. 460262, issued September 29, 1891, to Hayward A. Harvey, of Orange, New Jersey, for certain improvements in decrementally hardened armor plates and in the art of manufacturing the same; and

Whereas an agreement was made and entered into under date of March 21, 1892, by and between the aforesaid parties hereto, whereby the party of the first part granted to the party of the second part the right to use and employ the Harvey process aforesaid in the manufacture of armor plates for certain vessels of the Navy therein named, for the sum of $75,000, to be paid by the party of the second part to the party of the first part as royalty therefor, and as utilized, at the rate of one-half of one cent per pound of the weight of the finished plate, the party of the first part guaranteeing that the cost to the party of the second part of
18 the application of said process to armor plates shall not exceed nine-tenths of one cent per pound of the finished plate, provided the application of such process should be made under the direction of the party of the first part; and

Whereas the party of the second part has entered into an agreement with the Bethlehem Iron Company, of South Bethlehem, Pennsylvania, for the treatment, according to said Harvey process, of armor plates for certain of the vessels mentioned in the aforesaid agreement, at a price in excess of the limit guaranteed by the party of the first part hereto, as aforesaid, the application of such process not to be made under the direction of said party of the first part:

Now, therefore, the aforesaid agreement of March 21, 1892, is hereby cancelled and annulled, and it is hereby mutually understood, covenanted, and agreed by and between the parties hereto that for and in consideration of the premises, and in consideration of the sum of $96,056.46 to be paid by the party of the second part to the party of the first part as royalty, the party of the second part may, upon the terms hereinafter stated, use and employ, in the treatment of armor plates manufactured or to be manufactured for all naval vessels the construction of which was authorized by Congress up to and including July 19, 1892, the aforesaid Harvey process, and may use and employ the armor plates for said vessels manufactured according to said process, it being understood, however, that ten per cent of said sum shall be withheld by the party of the second part

until, upon the receipt of the formulæ for the compounds used and employed in the application of the Harvey process, said process shall have been tried and found to be efficient, and, in the judgment of the Secretary of the Navy, of satisfactory value.

19 The party of the first part hereby covenants and agrees that it will hold and save harmless, and, at its own risk and expense, defend the United States from and against all and every demand or demands for the payment of any sum or sums of money in excess of the aforesaid sum of $96,056.46 as royalty for or on account of the use and employment of said process in the treatment of armor plates under this agreement, or of the armor plates manufactured in accordance therewith, and from and against all and every demand or demands for or on account of any infringement or alleged infringement of patented rights appertaining to said process or plates.

It is hereby further mutually understood, covenanted and agreed by and between the parties hereto that the party of the second part shall have the right to use and employ the aforesaid Harvey process in the treatment of armor plates for vessels which have been since July 19, 1892, or which may hereafter be, authorized by Congress, and to use and employ armor plates for such vessels manufactured according to said process, paying therefor to the party of the first part a royalty of one-half of one cent per pound of the finished plate.

It is hereby further mutually understood, covenanted, and agreed by and between the parties hereto that the party of the first part shall furnish full and complete information regarding the composition of the compounds employed in the Harvey process, and the application of the same, and shall impart to the party of the second part all information concerning any and all improvements which said party of the first part may, at any time in the future, make in or upon said process as covered by the aforesaid letters patent, and that the party of the second part shall

20 have the right to adopt, use, and employ any or all of such improvements in said process, and to use the armor plates manufactured in accordance therewith under the terms of this agreement, without the payment of any compensation or royalty therefor to the party of the first part, in addition to that to be paid as hereinbefore stipulated.

It is hereby further mutually understood, covenanted, and agreed by and between the parties hereto that this agreement shall not, nor shall any interest herein, be transferred by the party of the first part to any other person or persons, and that no Member of or Delegate to Congress, officer of the Navy, nor any person holding any office or appointment under the Navy Department, shall be admitted to any share or part of this agreement or to any benefit to arise therefrom; but this stipulation, so far as it relates to Members of or Delegates to Congress, shall not be considered to extend to this agreement, it being made with an incorporated company.

It is hereby further mutually understood, covenanted, and agreed by and between the parties hereto that if, at any time, the party of the first part shall fail to comply with and fulfil the terms, conditions, and requirements of this agreement on its part, the party of the second part may demand and recover from the party of the first part, on account of such failure, and as liquidated damages, a sum of money equal to the penalty

of the bond accompanying this agreement, and that in case it should at any time be judicially decided that the party of the first part is not legally entitled, under the letters patent aforesaid, to own and control the exclusive right to the use and employment of said process and the decrementally hardened armor plates produced thereunder, as set forth in
21 the letters patent aforesaid, then the payment of royalty under the terms of this agreement shall cease, and all sums of money due the party of the first part from the party of the second part, as royalty for the use and employment of said process and armor plates, as aforesaid, shall become the property of the party of the second part.

The party of the second part, in consideration of the premises, hereby covenants and agrees that all warrants for payments to be made in accordance with the terms of this agreement shall be made payable to the party of the first part or its order.

In witness whereof, the respective parties hereto have hereunto set their hands and seals the day and year first above written.

HARVEY STEEL CO'Y., [SEAL.]
By H. A. HARVEY,
President.

Attest:
WM. ALLEN SMITH, *Sec'y.*

THE UNITED STATES,
By HILARY A. HERBERT. [SEAL.]
As Secretary of the Navy.

Signed, sealed, and delivered in the presence of—
SAM. P. LEMLY, *Judge-Advocate-General,*
as to Hilary A. Herbert, *Secretary of the Navy.*

22 EXHIBIT C.

Contract for nickel-steel armor plates and appurtenances.

This contract of two parts, made and concluded this first day of June, A. D. 1896, by and between the Carnegie Steel Company, Limited, a limited partnership association organized under the laws of the State of Pennsylvania and doing business in the county of Alleghany, in said State, represented by two members of the board of managers of said company, party of the first part, and the United States, represented by the Secretary of the Navy, party of the second part, witnesseth, that for and in consideration of the payments hereinafter specified the party of the first part, for itself and its successors and assigns and its legal representatives, does hereby covenant and agree to and with the United States as follows, that is to say:

First. The party of the first part will, at its own risk and expense, manufacture and deliver to the Navy Department, in the manner and within the periods prescribed and according to the conditions stated in the advertisement of the Secretary of the Navy, dated April 15, 1896, inviting proposals for nickel-steel armor plates, the proposal of the party of the first part under said advertisement, and the printed circular (including the drawings mentioned and described therein, with addenda

to specifications), approved by the Secretary of the Navy April 14, 1896, which advertisement, proposal, and circular, hereto annexed, shall be deemed and taken as forming part of this contract, with the like operation and effect as if the same were incorporated herein, the nickel-steel armor plates and appurtenances therein described or referred to and at the prices per ton for the different exhibits and for the total price as follows:

23 Class A.—For "Kearsarge."

Exhibit 1.

	Approximate weight in tons.
Side armor, forward, harveyed	60
Side armor, double tapered plates, harveyed	137
Side armor, amidship, harveyed	635
Side armor, triangular athwartship, harveyed	31
Bolts and nuts	10
Total Class B, Exhibit 1	873

Exhibit 3.

13″ B. L. R. barbettes, harveyed	568
Bolts and nuts	7
Total Class A, Exhibit 3	575

Exhibit 4.

Plate A, 8″ B. L. R. turrets, harveyed	44
Plate B, 8″ B. L. R. turrets, harveyed	93
Tops, 8″ B. L. R. turrets	15
Sight-hood tops, 8″ B. L. R. turrets	1
Seam straps, 8″ B. L. R. turrets	2
Sight hoods, 8″ B. L. R. turrets	7
Bolts and nuts	1
Total Class A, Exhibit 4	163

Exhibit 6.

Casemate, athwartship, harveyed	34
Casemate, side, harveyed	292
Bolts and nuts	3
Total Class A, Exhibit 6	329

Class B.—For "Kentucky."

Exhibit 3.

	Approximate weight in tons.
13″ B. L. R. barbettes, harveyed	568
Bolts and nuts	7
Total Class B, Exhibit 3	575

24 Exhibit 4.

Plate A, 8″ B. L. R. turrets, harveyed	44
Plate B, 8″ B. L. R. turrets, harveyed	93
Tops, 8″ B. L. R. turrets	15
Sight-hood tops, 8″ B. L. R. turrets	1
Seam straps, 8″ B. L. R. turrets	2
Sight hoods, 8″ B. L. R. turrets	7
Bolts and nuts	1
Total Class B, Exhibit 4	163

Exhibit 6.

Casemate, athwartship, harveyed	34
Casemate, side, harveyed	292
Bolts and nuts	3
Total Class B, Exhibit 6	329
Total	3,007

Subject, however, to such variations in said total price, and in the weights, and in the aggregate weight of said armor plates and appurtenances, as may result from changes which may be made under provisions in the aforesaid circular relating to changes, or from the operation of other conditions therein contained which may affect the total price or weights or aggregate weight aforesaid: Provided, however, That the aggregate weight of the armor plates and appurtenances to be delivered under this contract shall be finally determined in accordance with the several conditions and provisions relating thereto contained in the aforesaid circular; such armor plates and appurtenances to be of domestic manufacture, and to conform to and with all the details, requirements, and stipulations relating to material, manufacture, tests, inspection, and in all respects to the conditions stated in the aforesaid circular.

* * * * * * *

25 Fifth. The party of the first part, in consideration of the premises, hereby covenants and agrees to hold and save the United States harmless from and against all and every demand or demands of any nature or kind for or on account of the adoption of any plan, model, design, or suggestion, or for or on account of the use of any patented

invention, article or appliance, excepting the use and employment of the Harvey process, which has been or may be adopted or used in or about the manufacture or production of said armor plates and appurtenances, or any part thereof, under this contract, and to protect and discharge the Government from all liability on account thereof, or on account of the use thereof, by proper releases from patentees or otherwise, and to the satisfaction of the Secretary of the Navy, it being expressly understood and agreed that the party of the second part shall hold and save the party of the first part harmless from and against all and every demand or demands on account of infringement of patented rights in using and employing said Harvey process in the treatment of armor plates under this contract.

* * * * * * *

26 EXHIBIT D.

In reply address the Secretary of the Navy and refer to No. 1552–98.
E. P. H.

NAVY DEPARTMENT,
Washington, D. C., June 22, 1898.

SIR: I have the honor to transmit herewith, in pursuance of the provisions of section 1063 of the Revised Statutes, a number of papers described upon the accompanying schedule, relating to the claim of the Harvey Steel Company for certain royalties, under two contracts entered into with this Department, and dated, respectively, March 21, 1892, and April 12, 1893. The purpose of transmitting these papers is that this claim of the Harvey Company may receive trial and adjudication by the court, as provided by the statute cited.

Any further information afforded by the files and records of this Department in relation to the claim referred to will be promptly furnished upon call of the court.

Very respectfully, JOHN D. LONG,
Secretary.

The CHIEF CLERK,
Court of Claims.

27 SCHEDULE.

Papers relating to the claim of the Harvey Steel Company for royalty.

"A." Letter, dated October 14, 1897, of William Allen Smith, Treasurer of the Harvey Steel Company, to the Secretary of the Navy, requesting account and payment of royalties due that company.

"B." Agreement, dated March 21, 1892, granting to the Government the right to use the Harvey process in the manufacture of armor plate.

"C." Agreement, dated April 12, 1893, cancelling the agreement of March 21, 1892, and granting the right to the Government to use and employ the Harvey process in the manufacture of armor.

"D." Letter of the Bureau of Ordnance, dated December 4, 1893, submitting voucher for payment of ten per cent reservation to the Harvey Steel Company.

"E." Letter of the Bureau of Ordnance, dated November 3, 1894, recommending that no further royalties be paid to the Harvey Steel Company.

"F." Letter of the Bureau of Ordnance, dated September 27, 1895, recommending that no further royalties be paid to the Harvey Steel Company.

"G." Harvey patent No. 376194.

"H." Harvey patent No. 460262.

"I." Harvey patent No. 498390.

"J." Letter of Harvey Steel Company, dated October 23, 1895, relative to the facts upon which the conclusion of Capt. Sampson is based.

"K." Decree of the circuit court of the United States, eastern district of Pennsylvania, in the case of the Harvey Steel Company vs. the Bethlehem Iron Company.

"L." Decree of the circuit court of the United States, western district of Pennsylvania, in the case of the Harvey Steel Company vs. The Carnegie Steel Company.

"M." Brief of Hon. J. R. Soley, on the question whether the alleged invalidity of the patent of the Harvey Steel Company is a defense in a suit for royalty, under contract with the company for use of Harvey process.

"N." Letter of the Commissioner of Patents, dated December 27, 1897, relating to the Harvey patents, with enclosures: Opinion of examiners and list of patents.

"O." Report of Bureau of Ordnance, dated December 20, 1897, showing armor manufactured at or above the temperature prescribed in the Harvey patents.

28 "P." Memorandum of the Bureau of Ordnance, dated January 7, 1898.

"Q." Letter, dated June 27, 1893, of the Carnegie Steel Company, relative to "harveyizing armor."

"R." Letter, dated October 22, 1893, of Harvey Steel Company enclosing copies of decrees and injunctions in cases of Harvey Steel Company vs. Bethlehem Iron Company; and Harvey Steel Company vs. Carnegie Steel Company.

"S." Letter of the Harvey Steel Company, dated November 17, 1897, calling attention to decrees furnished, in cases against the Bethlehem Iron Company and the Carnegie Steel Company.

"T." Letter of Harvey Steel Company, dated November 19, 1897, relative to payment of royalty under the agreement of April 12, 1893.

"U." Memorandum of the Judge-Advocate-General relating to the claim of the Harvey Steel Company, November 30, 1897.

"V." Supplementary memorandum by the Judge-Advocate-General dated January 7, 1898.

29 III.—*Traverse. Filed March 10, 1903.*

In the Court of Claims of the United States. December term, A. D. 1903–4.

HARVEY STEEL CO.
vs.
THE UNITED STATES. } No. 21110.

And now comes the Attorney-General, on behalf of the United States, and answering the petition of the claimant herein, denies each and every allegation therein contained, and asks judgment that the petition be dismissed.

L. A. PRADT,
Assistant Attorney-General.

Filed March 10, 1903.

IV.—*Argument and submission of case.*

At a Court of Claims held on the 10th and 11th days of March, 1903, this case was argued and submitted

30 *V.—Findings of fact as amended and conclusion of law filed by the court.*

On May 25, 1903, the court filed its findings of fact, and on February 29, 1904, it filed an order amending the same. Said findings as amended and the conclusion of law are as follows: (See page 49 of this record for order of Feby. 29, 1904.)

This case having been heard by the Court of Claims, the court, upon the evidence, makes the following

FINDINGS OF FACT.

I.

The Harvey Steel Company, the claimant herein, is, and at all times since the year 1887 has been, a corporation created, organized, and existing under the laws of the State of New Jersey.

II.

On the 29th day of September, 1891, letters patent of the United States, bearing date on that day, and numbered 460262, had been granted to the said Hayward A. Harvey, for such "Harvey" process and armor plates, and by a written assignment, dated October 7, 1891, the said letters patent had been assigned to and had become vested in the claimant, who then, and at all times thereafter, has continued to be, and now is, the owner of all patented rights in and to said process and armor plates, and all rights otherwise acquired for practicing, using, or producing the same.

31

III.

In 1890 the claimant exhibited to the Chief of the Bureau of Ordnance of the Navy Department an armor plate, and informed him that Mr. Hayward A. Harvey had discovered a process for hardening such plates which would produce plates of a combined hardness and toughness which had not yet been attained by manufacturers. To test this invention the Chief of Ordnance procured two plates from well-known manufacturers—the Linden Steel Company—hardened by known existing methods. One of these was given to the claimant to harden by the Harvey process. The other was retained by the Ordnance Bureau. Both were subjected ultimately to the same test. The Chief of Ordnance officially reported this test to the Secretary of the Navy as follows:

"One plate, about 2½ feet square and 6 inches thick, was carbonized, in a gradually decreasing amount, to a depth of 3 inches, and subjected to a comparative ballistic test by the attack of a 6-pounder Hotchkiss projectile, with a similar plate untreated. The resulting penetration in the untreated plate was about 3 inches. In the carbonized plate it was nil, the projectile being completely shattered.

"In view of these results, which were reproduced and corroborated by further experiments, the Bureau has ordered an untreated armor plate 8 feet by 6 feet by 10½ inches, and proposes to have erected at the Washington Navy-Yard the necessary plant for treatment by the Harvey process. It will then be subjected to a ballistic attack with the 6-inch gun, and a comparative study made with the effects upon the foreign plates recently tested at Annapolis.

"The object of the experiments, as will be apparent, is the development of an armor plate which shall possess a superficial hardness and the toughness inherent in all steel, or one of its alloys."

IV.

In February, 1891, the Chief of Ordnance, to further test the Harvey process, procured two armor places from a foreign manufacturer—Schneider & Co.—known as Creusot plates. One of these in like manner was retained by the Ordnance Bureau, and one the claimant hardened, and both were subjected to the same test. The Chief of Ordnance officially reported the results of this test to the Secretary of the Navy as follows:

"In February last took place the test of the Creusot 10½-inch steel plate, which had been treated by the Harvey process at the Washington Navy-Yard. The plate was attacked by seven 6-inch armor-piercing shells—three Holtzer and four Carpenter—fired from a 6-inch gun of 35 calibers, the striking velocity being 2,065 foot-seconds. The greatest penetration was 4 inches, except in one round, that at the center of the plate, where the point of the shell reached the backing. All the projectiles were broken up. The plate was cracked, but until the last round none were detached from the backing; at this round about one-eighth of the plate fell to the ground. These results are remarkable and indicated to the Department a probability that in this treatment has been found the means of producing the ideal armor plate—a hard front combined with a tough back, without any weld or other line of demarcation between the two.

32

V.

Following these tests, on the 3d day of March, 1891, at the request of the Navy Department an option was given by the claimant to the Navy Department for the purchase of the application of the Harvey process for treating armor plates, which option is recited and set forth in the contract of 21st March, 1892, set forth in finding VI.

VI.

On the 3d day of March, 1891, the Navy Department accepted the offer or option of the claimant, and agreed to comply with the terms thereof; and on the 21st day of March, 1892, the following contract was entered into by and between the claimant and the Secretary of the Navy:

"Memorandum of an agreement of two parts, made and entered into this twenty-first day of March, A. D. 1892, by and between the Harvey Steel Company, a corporation created under the laws of the State of New Jersey, and doing business in said State, represented by the president of said corporation, of the one part (hereinafter called the party of the first part), and the United States, represented by the Secretary of the Navy, of the other part (hereinafter called the party of the second part).

"Whereas the party of the first part is the owner of all and singular the patented rights in and to a certain process, known as the 'Harvey process,' for the treatment of armor plate for use in the construction of vessels; and

"Whereas the parties have agreed and do hereby agree that, upon the terms hereinafter stated, armor plate manufactured or treated under the said 'Harvey process' shall, so far as possible, be supplied to such of the following-described naval vessels as the Department may from time to time designate, to wit:

"Cruiser No. 6. 'Amphitrite.'
"Cruiser No. 7. 'Monadnock.'
"Cruiser No. 8. 'Terror.'
"Cruiser No. 9. 'Texas.'
"Cruiser No. 10. 'Maine.'
"Cruiser No. 11. 'Monterey.'
"Cruiser No. 12. 'New York.'
"Cruiser No. 13. 'Indiana.'
"Gunboat No. 5. 'Massachusetts.'
"Gunboat No. 6. 'Oregon.'
"'Puritan.' Ram.

"Whereas the said Harvey Steel Company, under date of March 3, 1891, in a communication signed by B. G. Clark, president; H. A. Harvey, general manager, and Theodore Sturges, treasurer, agreed to give the Navy Department the option of purchasing the right to use and employ the 'Harvey process' for treating armor plates, as follows:

"We hereby agree to give to the Naval Department an option for the purchase of the application of the Harvey process for treating armor

plates, which was tested at the Naval Ordnance Proving Ground, Annapolis, Md., February 14, 1891, on the following terms, viz:

"In the event of the process proving of value, after further tests, and upon the demand by the Naval Department for its application to armor plating, the sum of $75,000 is to be paid by the latter to the Harvey Steel Company as royalty therefor, and as utilized, at the rate of one-half (½) of one (1) cent per pound of the weight of the finished plate. This royalty of one-half (½) of one (1) cent per pound is to cease when the said sum of $75,000 has been paid.

"The Navy Department is to have the right to use the process, should it so desire, without further compensation, upon all armor plating which is to be applied to vessels, the construction of which is authorized by Congress at this date. In the event of authorization by Congress of the construction of other vessels of war than those above mentioned, a new contract, for the further application of the Harvey process of treating armor plates, is to be made between the Naval Department and the latter, should the Department so desire.

"It is understood that the Naval Department will undertake to bear all the expense of the experimental development of the process as applied to armor plates, our Mr. Harvey to furnish, in consultation with the Bureau of Ordnance, all details at present in his possession in regard to the process, or which he may personally develop, in the perfection of his methods of treatment as applied to armor plating.

33 "Whereas the Navy Department, under date of March 3, 1891, in a communication signed by Wm. M. Folger, Chief of the Bureau of Ordnance, accepted the terms of the offer of the Harvey Steel Company, as stated in the communication above mentioned, and by this agreement does accept the option offered by the party of the first part in the first paragraph of said communication; and

"Whereas the party of the second part has agreed and does hereby agree to also pay, as hereinafter set forth, the expense of applying said process in the manufacture or treatment of said armor plate:

"Now, therefore, it is mutually understood, covenanted, and agreed by and between the parties hereto that the party of the second part, upon the terms herein stated, may use and employ, in the treatment of armor plate manufactured or to be manufactured for naval vessels, as hereinbefore stated, the hereinbefore-mentioned process known as the 'Harvey process.'

"The party of the first part, in consideration of the premises, and provided the said process of treating said armor plate shall be conducted at the Bethlehem Iron Works, at South Bethlehem, Pennsylvania, or elsewhere, under the direction of the party of the first part, hereby guarantees that, in addition to the hereinbefore-mentioned royalty of one-half of one cent per pound, to be paid by the party of the second part to the party of the first part, upon armor for vessels which have been authorized by Congress up to March 3, 1891, the additional cost to the party of the second part of applying the Harvey process, hereinbefore referred to, to the armor plate, as aforesaid, shall, during the period of one year from the date hereof, be nine-tenths of one cent ($0.009) per pound of the finished plate, and that after the expiration of the period of one year from the date hereof the said additional cost to the party of the second

part shall not exceed nine-tenths of one cent per pound of the finished plate, and in case it shall be found that the actual cost of the application of the said process to the armor plate shall have been diminished during one year from the date hereof, then the said additional cost to the party of the second part shall thereafter be equal to the said actual cost of the application of such treatment to the armor plate plus one-half ($\frac{1}{2}$) the difference between said actual cost of application and the sum of nine-tenths of one cent ($0.009) per pound of the finished plate.

"The party of the first part hereby further covenants and agrees that it will hold and save harmless and, at its own expense, defend the United States from and against all and every demand or demands for or on account of the use and employment of the 'Harvey process,' above mentioned, in the manufacture or treatment of armor, and from all and every demand or demands which shall hereafter be made for the payment of any sum or sums of money in excess of the aforesaid cost for royalty and treatment of armor under said process, to be paid as hereinbefore specified and provided for in this contract.

"Finally, it is hereby mutually understood, covenanted, and agreed by and between the parties hereto that the party of the second part shall render to the party of the first part quarterly reports of all armor plate manufactured or treated under the said Harvey process, which the party of the second part shall have received during the three months next preceding the dates of such reports, respectively, and within a period of thirty days after the rendition of each of said quarterly reports the party of the second part shall pay to the party of the first part such sum of money as may be required to cover the said royalty of one-half of one cent per pound, and also the cost of treatment by said Harvey process of the armor plate which shall have been received by the party of the second part during the three months next preceding the commencement of said period of thirty days, it being hereby understood and agreed that the first of the said quarterly reports shall be rendered on or before the first day of May, 1892, and shall be thereafter rendered every three months until all the armor treated for vessels authorized by Congress to March 3, 1891, shall have been received by the party of the second part.

"In witness whereof the respective parties hereto have hereunto set their hands and seals the day and year first above written.

"THE HARVEY STEEL COMPANY,
"By G. B. CLARK, *Pres.*
"THE UNITED STATES,
"By B. F. TRACY,
"*As Secretary of the Navy.* [SEAL.]

"Signed and sealed in the presence of—
"Attest:
[SEAL.] "L. L. STURGES, *Secty. pro tem.*

"WM. B. REMEY, *Judge-Advocate-General,*
"as to B. F. Tracy, *Secretary of the Navy.*"

34

VII.

Thereafter additional trial armor plates were subjected to numerous experimental tests by the claimant and by the officers and agents of the United States, and on the 8th day of October, 1892, the claimant was notified that the said process was definitely and formally adopted by the Navy Department by the following letter:

"DEPARTMENT OF THE NAVY, BUREAU OF ORDNANCE,
"*Washington, D. C., October 8, 1892.*

"The HARVEY STEEL CO.,
"*Newark, N. J.*

"SIRS: Your letter of the 29th ultimo, addressed to the honorable Secretary of the Navy, has been referred to this Bureau, which has cognizance of the matter.

"You are informed that the Harvey process for armor plate has been definitely adopted by the Navy Department.

"Respectfully,

"WM. M. FOLGER,
"*Chief of Bureau.*"

VIII.

Acting under the requirement of said contract of March 21, 1892, by which the claimant agreed that their Mr. Hayward A. Harvey should furnish to the United States all details then in his possession in regard to the process, or that he might develop in the perfection of his method of treatment, the said United States, on February 18, 1893, and on March 14, 1893, required the said claimant and the said Hayward A. Harvey to furnish and reveal to the Navy Department its secret process and improvements, and thereupon the claimant did so reveal the same.

IX.

On the 30th of March, 1893, the defendants, by the Secretary of the Navy, proposed a settlement between the Navy Department and the claimant, which proposal was in the words following:

35

BUREAU OF ORDNANCE,
NAVY DEPARTMENT,
Washington City, March 30, 1893.

The HARVEY STEEL COMPANY,
Newark, N. J.

SIRS: I am directed by the Secretary of the Navy to propose the following settlement of the contract question at present under discussion between the Navy Department and the Harvey Steel Company, viz:

The contract of March 21st, 1892, between the Navy Department and the Harvey Steel Company to be annulled, the price to be paid for the cost of the treatment of armor plates by the Harvey process having been arranged for by contracts with the Bethlehem Iron Company and the Carnegie Steel Company.

A new contract to be made between the Secretary of the Navy and the Harvey Steel Company, by which the Department agrees:

1. To pay at once the sum of $96,056.46—this sum being the total royalty, at the rate of ½ c. per pound upon 8,576.47-tons of armor, the amount of armor which the Department proposes to Harveyize intended for vessels, the construction of which was authorized by Congress prior to March 21st, 1892, and for which the contract of that date was made. Also for the armor of the "Iowa" and "Brooklyn," authorized since that date, and for which no contract exists.

2. To pay a royalty of ½ c. per pound on all future contracts for armor to be treated by the Harvey process.

3. The Harvey Steel Company to furnish all information regarding the composition of the compound employed in the Harvey process, and all information regarding its application in possession of the company. Also any improvements which the Harvey Steel Company may make in said process at any future time.

Respectfully,

W. T. SAMPSON,
Chief of Bu. Ordnance.

X.

On the 12th day of April, 1893, the Navy Department entered upon a new contract with the claimant, in and by which it agreed to pay to the said claimant the sum of $96,056.46 (it being understood, however, that 10 per cent of the said sum should be withheld by the United States until, upon the receipt of the formulæ for the compounds used and employed in the application of the Harvey process, said process should be used and found to be efficient, and in the judgment of the Secretary of the Navy of satisfactory value), and should have the right to employ the said process on all vessels of war which might, after July 19, 1892, be authorized by Congress upon the payment of royalty of one-half of 1 cent per pound for the finished plate; and the defendants, on or about the 12th day of April, 1893, paid to the said claimant the said sum of $96,056.46, less the 10 per cent reserved therefrom. This contract is in the terms following:

"Memorandum of an agreement, of two parts, made and entered into this 12th day of April, A. D. 1893, by and between the Harvey Steel Company, a corporation created under the laws of the State of New Jersey and doing business in said State, represented by the president of said corporation, of the one part (hereinafter called the party of the first part), and the United States, represented by the Secretary of the Navy, of the other part (hereinafter called the party of the second part).

"Whereas the party of the first part is the owner of all and singular the patented rights in and to a certain process, known as the Harvey process, for the treatment of armor plates for use in the construction of vessels, and of the exclusive right to the use and employment of armor plates manufactured according to said process, as particularly set forth in letters patent of the United States, No. 460262, issued September 29, 1891, to Hayward A. Harvey, of Orange, New Jersey, for certain

improvements in decrementally hardened armor plates and in the art of manufacturing the same; and

36 "Whereas an agreement was made and entered into, under date of March 21, 1892, by and between the aforesaid parties hereto, whereby the party of the first part granted to the party of the second part the right to use and employ the Harvey process aforesaid in the the manufacture of armor plates for certain vessels of the Navy therein named for the sum of $75,000, to be paid by the party of the second part to the party of the first part as royalty therefor, and as utilized, at the rate of one-half of one cent per pound of the finished plate, the party of the first part guaranteeing that the cost to the party of the second part, of the application of said process to armor plates, shall not exceed nine-tenths of one cent per pound of the finished plate, provided the application of such process should be made under the direction of the party of the first part; and

"Whereas the party of the second part has entered into an agreement with the Bethlehem Iron Company of South Bethlehem, Pennsylvania, for the treatment, according to said Harvey process, of armor plates for certain of the vessels mentioned in the aforesaid agreement, at a price in excess of the limit guaranteed by the party of the first part hereto, as aforesaid, the application of such process not to be made under the direction of said party of the first part,

"Now, therefore, the aforesaid agreement of March 21, 1892, is hereby canceled and annulled, and it is hereby mutually understood, covenanted, and agreed by and between the parties hereto, that for and in consideration of the premises and in consideration of the sum of ninety-six thousand and fifty-six dollars and forty-six cents ($96,056.46) to be paid by the party of the second part to the party of the first part as royalty, the party of the second part may, upon the terms hereinafter stated, use and employ in the treatment of armor plates manufactured or to be manufactured for all naval vessels, the construction of which was authorized by Congress up to and including July 19, 1892, the aforesaid Harvey process, and may use and employ the armor plates for said vessels manufactured according to said process, it being understood, however, that ten per cent of said sum shall be withheld by the party of the second part until, upon the receipt of the formulæ for the compounds used and employed in the application of the Harvey process, said process shall have been tried and found to be efficient, and, in the judgment of the Secretary of the Navy, of satisfactory value.

"The party of the first part hereby further covenants and agrees that it will hold and save harmless, and at its own risk and expense defend the United States from and against all and every demand or demands for the payment of any sum or sums of money in excess of the aforesaid sum of $96,056.46 as royalty for or on account of the use and employment of said process in the treatment of armor plates under this agreement, or of the armor plates manufactured in accordance therewith, and from and against all and every demand or demands for or on account of any infringement or alleged infringement of patented rights appertaining to said process or plates.

"It is hereby further mutually understood, covenanted, and agreed by and between the parties hereto that the party of the second part shall

have the right to use and employ the aforesaid Harvey process in the treatment of armor plates for vessels which have been since July 19, 1892, or which may hereafter be authorized by Congress, and to use and employ armor plates for such vessels manufactured according to said process, paying therefor to the party of the first part a royalty of one-half of one cent per pound of the finished plate.

"It is hereby further mutually understood, covenanted, and agreed by and between the parties hereto that the party of the first part shall furnish full and complete information regarding the composition of the compounds employed in the Harvey process, and the application of the same, and shall impart to the party of the second part all information concerning any and all improvements which said party of the first part may, at any time in the future, make in or upon said process as covered by the aforesaid letters patent, and that the party of the second part shall have the right to adopt and use and employ any or all of such improvements in said process, and to use the armor plates manufactured in accordance therewith under the terms of this agreement, without the payment of any compensation or royalty therefor to the party of the first part, in addition to that to be paid as hereinbefore stipulated.

37 "It is hereby further mutually understood, covenanted, and agreed by and between the parties hereto, that this agreement shall not, nor shall any interest herein, be transferred by the party of the first part to any other person or persons, and that no member of or delegate to Congress, officer of the Navy, nor any person holding any office or appointment under the Navy Department, shall be admitted to any share or part of this agreement or to any benefit to arise therefrom; but this stipulation, so far as it relates to members of or delegates to Congress, shall not be considered to extend to this agreement, it being made with an incorporated company.

"It is hereby further mutually understood, covenanted, and agreed by and between the parties hereto, that if, at any time, the party of the first part shall fail to comply with and fulfill the terms, conditions, and requirements of this agreement on its part, the party of the second part may demand and recover from the party of the first part, on account of such failure, and as liquidated damages, a sum of money equal to the penalty of the bond accompanying this agreement, and that in case it should at any time be judicially decided that the party of the first part is not legally entitled, under the letters patent aforesaid, to own and control the exclusive right to the use and employment of said process and the decrementally hardened armor plates produced thereunder, as set forth in the letters patent aforesaid, then the payment of royalty under the terms of this agreement shall cease, and all sums of money due the party of the first part from the party of the second part, as royalty for the use and employment of said process, and armor plates, as aforesaid, shall become the property of the party of the second part.

"The party of the second part, in consideration of the premises, hereby covenants and agrees that all warrants for payments to be made in accordance with the terms of this agreement shall be made payable to the party of the first part or its order.

"In witness whereof, the respective parties hereto have hereunto set their hands and seals the day and year first above written.

"HARVEY STEEL CO'Y,
"By H. A. HARVEY, *President.* [SEAL.]

"Attest:

"WM. ALLEN SMITH, *Sec'y.*

"THE UNITED STATES,
"By HILARY A. HERBERT,
"*as Secretary of the Navy.* [SEAL.]

"Signed, sealed, and delivered in the presence of—
"SAM. C. LEMLY,
"*Judge-Advocate-General.*
"as to Hilary A. Herbert,
"*Secretary of the Navy.*"

XI.

Afterwards, on or about December 7, 1893, the defendants' officers being satisfied that the claimant had complied with the said contract of April 12, 1893, and demonstrated the value and efficiency of the process, the 10 per cent withheld by the United States under said contract of April 12, 1893, was paid over to the claimant.

38 XII.

The Congress of the United States, by act approved on or about March 2, 1895, authorized the construction of two battle ships for the United States Navy, which were known respectively as No. 5 and No. 6, and subsequently named the "Kearsarge" and "Kentucky," and on or about the 15th day of April, 1896, the United States, by the Secretary of the Navy, issued and had advertised on that day inviting proposals for the supply of nickle-steel armor plates for the said two battle ships, to the amount of about 6,000 tons, the said advertisements requiring of the bidders that the said armor plates should be "treated by a process of super-carburization known as the 'Harvey' process," and the said advertisement further stating to the bidders as follows:

"Bids are hereby invited for supplying the following named material: About 6,000 tons, more or less, of nickle-steel armor, to be of the best material and domestic manufacture, part of which, as shown by the specifications, will be required to be treated by a process of super-carbonization known as the Harvey process."

"The prices paid for armor treated by the 'Harvey' process must not include anything for royalties, as the Department has acquired the right to use said process and will indemnify the contractors against all claims thereof."

XIII.

The Bethlehem Iron Company and the Carnegie Steel Company (Limited), having made bids in accordance with said specifications and advertisements, the United States, on or about the 1st day of June, 1896,

by its Secretary of the Navy, entered into two separate contracts with said companies, respectively, in which they agreed to furnish in certain proportions the armor described in said advertisements and circulars, including therein the "Harveyed" armor; and in compliance therewith, proceeded to manufacture and treat the armor plates, and supplied and delivered the same in due course to the United States. These plates were manufactured under the inspection and supervision of officers and agents of the Ordnance Bureau, and were accepted and paid for by the Bureau as having been treated by the Harvey process.

39 XIV.

The weight of the finished plates of said armor so treated and supplied to the United States by the said Bethlehem Iron Company and the Carnegie Steel Company (Limited), for the said battle ships "Kearsarge" and "Kentucky," at the rate of royalty of one-half of 1 cent per pound for the finished plate, amounted to the sum of $60,806.45, and the said sum is now wholly due and unpaid.

The claimant has applied to the United States and the Secretary of the Navy for payment of said royalty, which has been refused, and there is now due and owing from the United States to the said claimant, under the said contract of April 12, 1893, as royalties for armor used for said battle ships "Kearsarge" and "Kentucky," the sum of $60,806.45.

XV.

It has never at any time been judicially decided that the claimant is not legally entitled, under the Letters Patent No. 460262, to own and control the exclusive right to the use and employment of the process aforesaid, and the decrementally hardened armor plates produced thereunder.

CONCLUSION OF LAW.

Upon the foregoing findings of fact the court decides, as a conclusion of law, that the claimant is entitled to recover the amount of royalty set forth in Finding XIV, to wit, the sum of sixty thousand eight hundred and six dollars and forty-five cents ($60,806.45).

BY THE COURT.

40 VI.—*Opinion of the court and the dissenting opinion. Filed May 25, 1903.*

NOTT, Ch. J., delivered the opinion of the court:

Actions founded upon patented inventions fall into three classes of cases: First, ordinary suit for infringement, which are in their nature ex delicto and of which jurisdiction is to be found exclusively in the Federal courts; second, actions on express contracts for the purchase and sale of inventions either to the full extent of the patent or for some limited user of the invention, which are as purely ex contracto as other actions for the purchase and sale of other property. Of these cases State courts have jurisdiction. Third. Actions on implied contracts for the taking

and user of an inventor's property where the circumstances were such as to imply that the defendant did not intend to do an unlawful act, and that the claimant consented to the taking. These cases have so far appeared only in suits against the Government.

This is the first patent case which has come into this court founded upon an express contract. As a number of other patent cases came before the court about the same time this, with the others, has been held for more than ordinary consideration.

All of the cases which have hitherto come before the court have been founded upon implied contracts. In such cases all defenses were open to the defendants—the Government—which are open to ordinary defendants in ordinary actions for infringement. They could set up another title, a license under another antecedent patent; they could *could* attack the validity of a patent, and show that the invention which they appropriated was not proprty; they could maintain that the device which they manufactured differed in essential particulars from the device which the inventor had protected by letters patent; they could show facts negativing a presumption to contract, such as in actions for infringement which come under the designation of "implied license." In a word, they could always treat such suits—and, in fact, their counsel always have treated such suits—as if they were actions for infringement. In the proffer of evidence and the earnestness of argument, the distinctions between actions ex delicto and actions ex contracto have repeatedly been lost sight of. It is therefore not surprising that this suit has been defended (and with great ability) precisely as have all the others which have gone before it. But the court, nevertheless, must now consider whether its duties extend further than declaring and determining the contractual rights and obligations of the parties.

In 1890 the Government, like the governments of all other countries, was unable to manufacture or procure properly hardened plates for armored vessels. It was in this dilemma: That if the plates were sufficently heavy to withstand an enemy's shots, they would sink the vessel; and if they were sufficiently light to leave the vessel a floatative, manageable marine machine, they could be penetrated or shattered by an enemy's guns. In other words, artillery was then in advance of defensive armor. Such being the case, the inventor of the Harvey process went to the Chief of Naval Ordnance and informed him that he had discovered a process whereby the ideal combination of an exceedingly hard surface with an exceedingly tough interior could be obtained. The assertion was tested by two of the severest practical tests that could be devised. Two hardened plates were procured from a manufacturer. One was retained by the Bureau of Ordnance; the other was hardened by the
41 Harvey process; both were subjected to the same artillery fire. Under this test the one plate was destroyed and the other uninjured. So far the superiority of the Harvey plate over one of approved manufacture was established, but it was wisely deemed by the Ordnance Bureau that the Harvey plate should be compared with one which was regarded in Europe as superior to all others. Accordingly, two of the then celebrated Creusot plates, made by renowned manufacturers—Schneider & Co.—were imported by the Ordnance Bureau. One was retained as before, and one was given to the claimant, and both were sub-

jected to the same artillery fire and with like results. They indicated, said the Chief of Ordnance in his report to the Secretary of the Navy, "That in this treatment has been found the means of producing the ideal armor plate—a hard front combined with a tough back, without any weld or other line of demarkation between the two." These were the facts and circumstances in the light of which the express contract of March 21, 1892, was entered into.

By this contract of March 21, 1892, it was agreed that the "Harvey process" should be used in the treatment of armor plates to be manufactured for certain designated vessels, and that a royalty at certain rates "per pound" should be paid. The manufacture of such plates went on until the royalty amounted to $96,056.46. This contract has no particular bearing upon a second contract, the contract now in suit, but it is to some extent made a part of the second contract, and its existence and the work accomplished under it are a portion of the facts and circumstances leading to the last agreement. They are adverted to to show that no purchaser in the world ever better knew, or was more completely bound to know, what he was buying than were the defendants when they entered into the contract of April 12, 1893.

This contract of April 12, 1893, recited much of what had occurred between the parties, and provided that in consideration of the payment of the amount of $96,056.46, before mentioned, the contract of March 21, 1892, should be canceled and annulled; and that the defendants, upon new terms prescribed, should have the right to use the "Harvey process" in the manufacture of armor plates for all vessels which Congress had authorized or might thereafter authorize. It also provided that the claimant should hold and save harmless and, at its own risk and expense, defend the United States from and against all and every demand "for or on account of any infringement or alleged infringement of patented rights appertaining to said process." The terms imposed upon the defendants were that they should pay "a royalty of one-half of 1 per cent per pound of the finished plate."

It was also provided by this contract that 10 per cent of the royalties to be paid should be withheld until the Harvey process "shall have been tried and found to be efficient, and, in the judgment of the Secretary of the Navy, of satisfactory value." Under this clause, and a similar one in the preceding contract, 10 per cent had been withheld. But on the 4th of December, 1893, the Chief of the Ordnance Bureau certified to the Secretary of the Navy: "The first Harvey treated plate under the said agreement having been tested, with results demonstrating the satisfactory value and efficiency of the process, and a part of the "Maine's" side armor having been set up in the shops and found to be satisfactory, there being no important irregularities due to the application of the process, it is recommended that the reservation referred to be now paid."

42 The Secretary of the Navy adopted this recommendation and paid the 10 per cent.

After all these things had happened the defendants, on the 15th of April, 1896, without rescinding the still existing contract of April 12, 1893, publicly advertised for proposals for about 6,000 tons of armor plate, to be treated by the "Harvey process." And they furthermore expressly set forth in this advertisement that: "The prices bid for armor,

treated by the Harvey process, must not include anything for royalties, as the Department has acquired the right to use said process, and will indemnify the contractor against all claims therefor."

In response to this advertisement contracts were entered into on the 1st of June, 1896, with the Bethlehem Iron Company and the Carnegie Steel Company, the advertisement being made a part of each contract. Under these contracts armor plate for two ships of war was manufactured. This armor plate was inspected and tested by officers of the Ordnance Bureau and was accepted and paid for as "armor treated by the Harvey process." The process employed was precisely the process employed in the previously manufactured armor plates, concerning which the Chief of the Bureau had certified to the "satisfactory value and efficiency of the process," and the Secretary of the Navy had paid the reserved 10 per cent. When the armor plates manufactured by the Bethlehem and Carnegie companies were completed, and delivered, and accepted, and paid for, the claimant's cause of action certainly was complete. At that time the process was as satisfactory to the Secretary of the Navy as it ever had been; no rival inventor had appeared claiming that it was an infringement of another patent; no court had decided that the patentee "was not legally entitled" to own and contract the exclusive right to the use of the process; no suit was pending on the 17th of November, 1897, when the claimant demanded payment in which the validity of the patent was in issue. The royalty was due and payable then; the defendants had no defense to interpose at that time; they can not interpose one of their own subsequent making now.

A plainer case of estoppel never came before a court. The defendants first bound the claimant's hands by a contract which secured the right to themselves to use the invention and precluded the claimant from prosecuting the manufacturers as infringers. They next closed the claimant's eyes as against the manufacturers by advertising that the plates to be made were to be treated by the "Harvey process," and that "the prices bid for armor treated by the Harvey process must not include anything for royalties, as the Department has acquired the right to use said process, and will indemnify the contractor against all claims therefor." They did not rescind the contract or give a notice which would have put the claimant on its guard or enabled it to proceed against the manufacturers, but stood silent until the work was done and they had received the fruits of their agreement. Having received every possible benefit that was assured to them by the contract, they now seek to evade its obligations. Their position is that of a man who, to avoid the dangers and costs of an action in trespass or ejectment, enters under a lease and then seeks to evade the payment of rent by assuming the attitude of a wrongdoer and denying his landlord's title.

The same principle applies to the defense that the armor plates were not manufactured according to the Harvey process, as defined and limited in the patent. The claimant had brought the process to the
43 defendants before it was patented, and they have never been able to obtain the desirable plate except by the use of the process, patented or unpatented. The variations from the patent, if any there were, were trivial—so trivial that they were not known to the manufacturers when they made the plates, or to the defendants' officers who super-

vised the making. They were not discovered by the Ordnance Bureau until after the first work was completed, but they were known to the Bureau when the last work, the work involved in the case, was contracted for as plates to be manufactured by the Harvey process and under the Harvey patent and in pursuance of the Harvey contract. The process employed did not differ from the process which had been employed for the preceding plates. If the defendants conceded that the process which had been employed was the Harvey process, as defined in and secured by the patent, they continued to concede that when, with all the knowledge which they possess now, they advertised for plates to be manufactured by the Harvey process, and therein adverted to their contract as securing them the right to manufacture under the Harvey patent. The variations from the patented process, if substantial, would have practically stricken down the patent and left the invention valueless. There was but one way in which that issue could be properly tried, and that was by an action for infringement. Instead of misleading the claimant by their advertisement and contracts with the Bethlehem and Carnegie companies, it was the plain duty of the defendants to notify both the claimant and the companies of the new attitude which they intended to assume, and leave the claimant free to fight the battle of infringement with the manufacturers.

If this agreement did not import a warrantee, it was the duty of the defendants to have investigated the scope and validity of the claimant's patent before they purchased a right to manufacture under it. But as it does contain a warrantee of a right to manufacture and use, undisturbed, it is incumbent upon them to show that they have been ousted from the purchased right by the action of some superior patentee having a higher title, or that they have been disturbed in their possession of it.

If it should be said that the invalidity of the patent or the exceedingly restricted construction which the defendants seek to place upon it constitute a failure of consideration, it must be replied that the agreement itself contains a complete refutation of that defense.

A failure of consideration is where a man does not get, in whole or in part, the thing which he has agreed to pay for. The contract in this case provided against that possibility.

After the experimental tests to which the invention had been subjected before any contract was entered into, and after all the work which had been done and accepted under the preceding contract, the second contract, being the contract in suit, expressly provides that 10 per cent of royalties which may become due shall be withheld by the defendants until "said process shall have been tried and found to be efficient, and, in the judgment of the Secretary of the Navy, of satisfactory value." By this provision the defendants made the Secretary of the Navy the exclusive judge of whether or not there might be found in the future an unforeseen partial failure of consideration; and the claimant agreed to abide by his decision. When the Secretary of the Navy, adopting the recommendation of the Chief of the Ordnance Bureau, decided that the process was "efficient" and "satisfactory," and that the 10 per cent reserved should be paid, he rendered a decision, irrevocable so far as courts are
44 concerned, that there had been no failure of consideration. That decision, made after the making of the last contract, stands

unreversed by the Secretary of the Navy, and can not be questioned by the court.

In a word, this is a case where a man without fraud or misrepresentation entered into a contract; where he received from the other party all that the contract promised him or that he expected to receive; where he kept his mouth closed when he should have spoken, and withheld a defense when he should have interposed it; where, by his silence and his words, he misled the other contracting party and thereby deprived him of his legal right to the adjudication of courts of competent jurisdiction, which adjudication might be favorable to the other party and cause irreparable loss and injury to himself. Such a man is not entitled to set up in an action on the contract the defenses which the defendants' executive officers have insisted on interposing in this case.

The court has not entered into an examination of the patent; of the construction which should be given to it; of the state of the art; or of any of those questions which would properly be subjects of consideration if this were an action for an infringement. And concerning them no opinion is expressed.

The judgment of the court is that the claimant recover from the defendants the amount of $60,806.45.

WRIGHT, J., dissenting:

The chief, if not the only, defense interposed, and to which the evidences and arguments were directed on the trial of the case, is the invalidity of the patent, and that claimant's process was not used in the treatment of armor plates made for the defendant. The findings and opinion of the majority of the court ignore such defense, except to say in the opinion that a plainer case of estoppel never came before a court, and therefore the court did not enter into an examination of the patent, nor of the construction which should be given to it, nor of the state of the prior art, concerning which no findings are made nor opinion expressed. I do not agree with the majority of the court that the defendant is estopped to insist upon the defense offered, for the reason that I believe the contract, recited in the findings, explicitly reserves the right to do so, wherein it is stipulated that in case it should at any time be judicially decided that claimant is not legally entitled under the letters patent to own and control the exclusive right to the use and employment of the process described in the patent, then the payment of royalty under the terms of the agreement shall cease. The specific decision mentioned is sought in the present case, which the court by its refusal to find the facts concerning such defense, as disclosed by the evidence, and by otherwise ignoring the same, has thus denied to the defendant the right of an adjudication upon the subject. What the result might be if the court had entered upon a consideration of the defense interposed it would be useless for one member of the court to discuss in the absence of a proper finding of the facts, which a majority of the court have refused to make, and a due consideration of the questions arising upon such finding, which a majority of the court have declined to give. Had such finding been made and due consideration given, it is my strong belief that it would appear the process described in the patent of the claimant was included in the prior state of the art, and that such process was not used in the treatment of the armor plates in question.

45 VII.—*Judgment of the court.*

THE HARVEY STEEL COMPANY
vs.
THE UNITED STATES. } No. 21110.

At a Court of Claims held in the city of Washington on the 25th day of May, 1903, judgment was ordered to be entered as follows:

The court, upon due consideration of the premises, find for the claimant, and do order, adjudge, and decree that the claimant, the Harvey Steel Company, have and recover of and from the United States the sum of sixty thousand eight hundred and six dollars and forty-five cents ($60,806.45).

BY THE COURT.

46 VIII.—*Application for an appeal.*

THE HARVEY STEEL COMPANY
vs.
THE UNITED STATES. } No. ———.

From the judgment rendered in the above-entitled cause on the 25th day of May, 1903, in favor of the claimant, the defendants, by their Attorney-General, on the 3d day July, 1903, make application for and give notice of an appeal to the Supreme Court of the United States.

LOUIS A. PRADT,
Assistant Attorney-General.

Filed July 3, 1903.

47 IX.—*Defendant's motion for new trial. Filed October 24, 1903.*

And now comes the United States, the defendant in the above-entitled action, by its Assistant Attorney-General, and represents to this court that in the decision and judgment of this court herein there were committed the following errors of law, as will more fully appear from the brief herewith submitted:

First. In refusing to enter into an examination of the patent and the state of the art and to construe the said patent.

Second. In holding the facts requested in the defendant's requests for findings of fact numbered 5, 6, 7, and 8, on pages 4 to 6 of the defendant's original brief herein, to be immaterial to the decision of this case.

Third. In holding the facts requested in defendant's requests for findings of fact numbered 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 27, 28, 29, and 30, on pages 6 to 10 of the defendant's original brief herein, to be immaterial to the decision of this case.

Fourth. In holding the fact requested in defendant's request for finding of fact numbered 25, on page 10 of the defendant's original brief herein, to be immaterial to the decision of this case.

Fifth. In rendering judgment for the claimant herein and in not dismissing said petition.

The defendant above mentioned further represents that there were committed in said decision and judgment herein the following errors of fact, as will more fully appear from the brief herewith submitted:

First. The court erred in inserting in Finding II the words "for such Harvey process;" also in inserting in the same finding the words "and all rights otherwise acquired for practicing, using, or producing the same."

Second. The court erred in Finding III in inserting the words "to harden by the Harvey process."

Third. The court erred in Finding IV in inserting the words "to further test the Harvey process;" and, further, in the same finding, in inserting the words "hardened by the Harvey process."

48 Fourth. The court erred in Finding V in inserting the words "as the same had been exhibited to the Navy Department."

Fifth. The court erred in Finding VII in inserting the words "treated in accordance with said Harvey process."

Sixth. The court erred in Finding IX in finding that the United States, on March 30, 1893, had utilized the Harvey process on any armor, and that the amount of royalty calculated at one-half of 1 cent per pound then amounted to $96,056.46, or any other sum.

Seventh. The court erred in Finding XII in finding that the advertisements mentioned required that 6,000 tons of armor plate should be treated "by a process of supercarburization known as the Harvey process."

Eighth. The court erred in Finding XIII in inserting the words "proceeded to manufacture and treat the plates as aforesaid," and in finding that the plates mentioned were accepted and paid for by the Bureau of Ordnance as having been treated by the Harvey process.

Wherefore, the defendant moves that a new trial in this case be granted, and that the court examine the said patent and the state of the art and construe the same and make the findings of fact, the omission of which is mentioned above as errors of law; and further, that the court amend its findings of fact in the particulars above mentioned as being errors of fact.

L. A. PRADT,
Assistant Attorney-General.

WM. H. BUTTON,
Special Attorney.

49 X.—*Order amending findings of fact. Filed February 29, 1904.*

On the defendants' motion to correct the findings of fact filed by the court May 25, 1903, it is ordered:

Finding IV. In line 5 that the words "by the Harvey process" be stricken out.

Finding V. The finding as set forth will be stricken out and the following substituted therefor: Following these tests, on the 3d day of March, 1891, at the request of the Navy Department an option was given by the claimant to the Navy Department for the purchase of the application of the Harvey process for treating armor plates, which option is recited and set forth in the contract of 21st March, 1892, set forth in Finding VI.

Finding VII. In lines 1 and 2 strike out the words "treated in accordance with said Harvey process," and in lines 4 and 5 strike out the words "which demonstrated the beneficial results of the said Harvey process."

Finding IX. Strike out the entire finding and substitute the following: On the 30th of March, 1893, the defendants, by the Secretary of the Navy, proposed a settlement between the Navy Department and the claimant, which proposal was in the words following:

"BUREAU OF ORDNANCE,
"NAVY DEPARTMENT,
"*Washington, D. C., March 30, 1893.*

"THE HARVEY STEEL COMPANY,
"*Newark, N. J.*

"SIRS: I am directed by the Secretary of the Navy to propose the following settlement of the contract question at present under discussion between the Navy Department and the Harvey Steel Company, viz:

"The contract of March 21st, 1892, between the Navy Department and the Harvey Steel Company to be annulled, the price to be paid for the cost of the treatment of armor plates by the Harvey process having been arranged for by contracts with the Bethlehem Iron Company and the Carnegie Steel Company.

A new contract to be made between the Secretary of the Navy and the Harvey Steel Company, by which the Department agrees:

1. To pay at once the sum of $96,056.46, this sum being the total royalty, at the rate of ½c. per pound, upon 8,576.47 tons of armor, the amount of armor which the Department proposes to harveyize intended for vessels, the construction of which was authorized by Congress prior to March 21st, 1892, and for which the contract of that date was made. Also for the armor of the "Iowa" and "Brooklyn," authorized since that date, and for which no contract exists.

2. To pay a royalty of ½c. per pound on all future contracts for armor to be treated by the Harvey process.

3. The Harvey Steel Company to furnish all information regarding the composition of the compound employed in the Harvey process and all information regarding its application in possession of the company. Also any improvements which the Harvey Steel Company may make in said process at any future time.

"Respectfully,

"W. T. SAMPSON,
"*Chief of Bu. Ordnance.*"

Finding XII. Strike out the first 4 lines ending with the word "concerns," so that the finding will begin, "The Congress of the United States."

At the end of the first paragraph insert: "Bids are hereby invited for supplying the following-named material:

"About 6,000 tons, more or less, of nickel-steel armor, to be of the best material and domestic manufacture, part of which, as shown by the specifications, will be required to be treated by a process of supercarbonization, known as the Harvey process."

Defendants' finding VII is refused as irrelevant and as not being sustained in essential particulars by the weight of evidence.

Defendants' requests numbered 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30 are refused as irrelevant and immaterial.

BY THE COURT.

51 IX.—*Opinion of the court overruling defendants' motion for new trial, and dissent. Filed February 29, 1904.*

NOTT, Ch. J., delivered the opinion of the court:

Since the decision in this case (38 C. Cls. R., 662) the defendants have moved for a new trial upon the ground that the court erred "in refusing to enter into an examination of the patent, and the state of the art, and to construe the said patent." The court has duly considered the elaborate brief with which the motion was submitted, but remains of the opinion that the facts relied upon do not constitute a defense, and that a consideration of them is not properly admissible in an action founded, like this, upon an express contract.

The contract upon which this action is brought is something more than a naked license under a patent. It bound the claimant to disclose the "formulæ for the compounds used and employed in the application of the Harvey process;" it reserved payment in full until "said process shall have been tried and found to be efficient, and, in the judgment of the Secretary of the Navy, of satisfactory value." It required the claimant to covenant and agree "that it will hold and save harmless, and at its own risk and expense defend the United States from and against all and every demand or demands for the payment of any sum or sums of money in excess of the aforesaid sum of $96,056.46 as royalty for or on account of the use and employment of said process in the treatment of armor plates under this agreement, or of the armor plates manufactured in accordance therewith, and from and against all and every demand or demands for or on account of any infringement, or alleged infringement, of patented rights appertaining to said process or plates." It bound the claimant to "furnish full and complete information regarding the composition of the compounds employed in the Harvey process, and the application of the same." It also bound the claimant to "impart to the party of the second part all information concerning any and all improvements which said party of the first part may, at any time in the future, make in or upon said process" with the "right to adopt and use and employ any or all of such improvements in said process" "without the payment of any compensation or royalty therefor."

It is beyond question that the claimant has fully complied with all of the obligations of the contract; and it is also beyond question that the defendants have received all the benefits which they desired from the use of the process, and more than their officers expected. The defense rests upon the exceedingly narrow and technical ground that while both parties supposed they were employing the process as described in the letters patent, they, in a matter of temperature, deviated from the strict letter of its description. The court is by no means satisfied, as a matter of fact, that there was such a deviation; but whether there was or not it

was unquestionably trivial. The process intended to be described in the patent and supposed to be described in the patent was employed and the results, as before stated, were all that the defendants' officers desired and more than they expected.

In the opinion of the court, the contract entitled the defendants to a disclosure of the inventor's process, to his instructions and assistance in the practical application of the patent, and to use the process little or much, in whole or in part.

Apart from the question of estoppel the defendants, in the opinion of the court, have received all that they bargained for and are not entitled to set up their deviations, if any, from the specifications of the patent as a defense.

Moreover, the defendants still hold, under the same contract, the claimant's obligation to impart to them "all information concerning any and all improvements which said party of the first part may at any time in the future make in or upon said process," and "the right to adopt and use and employ any or all of such improvements in said process" "without the payment of any compensation or royalty therefor."

If a man should hire a horse of another at so much a day, and having ridden it as much as he pleased should refuse to pay anything on the ground that he had not used it a day, but only nine-tenths of a day, there is no court that would for a moment listen to such a defense. The Government's defense in this case is not so plain as in the one supposed, but it is of the same character.

The defendants' motion for a new trial is overruled.

WRIGHT, J., dissented for the reasons given in his opinion 38 C. Cls. R., 668.

HOWRY, J., did not sit in this case.

52 XII.—*Allowance of the appeal of the defendants.*

THE HARVEY STEEL COMPANY
vs.
THE UNITED STATES. } No. 21110.

At a Court of Claims held May 16, 1904, Mr. Assistant Attorney-General Pradt for the defendants presented an application for the allowance of appeal filed July 3, 1903, and it was ordered that it be allowed as prayed for.

BY THE COURT.

53 In the Court of Claims.

THE HARVEY STEEL COMPANY
vs.
THE UNITED STATES. } No. 21110.

I, John Randolph, assistant clerk of the Court of Claims, certify that the foregoing are true transcripts of the pleadings in the above-entitled cause, of the findings of fact and conclusion of law filed by the court, of the opinion of the court and the dissenting opinion, of the judgment

of the court, of the motion of the defendants for a new trial, and of the opinion of the court overruling said motion, of the application for and allowance of appeal to the Supreme Court of the United States.

In testimony whereof I have hereunto set my hand and affixed the seal of said Court of Claims this 23d day of May, A. D. 1904.

[SEAL.]

JOHN RANDOLPH,
Asst. Clerk Court of Claims.

(Indorsement on cover:) File No. 19373. Court of Claims. Term No. 275. The United States, appellant, vs. The Harvey Steel Company. Filed May 25, 1904. File No. 19373.

O

STIPULATION AND ADDITION TO RECORD.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1904.

No. 275.

THE UNITED STATES, APPELLANT,

vs.

THE HARVEY STEEL COMPANY.

APPEAL FROM THE COURT OF CLAIMS.

RECORD FILED MAY 23, 1904.

ADDITION FILED OCTOBER 10, 1904.

(19373.)

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1904.

No. 275.

THE UNITED STATES APPELLANT,

vs.

THE HARVEY STEEL COMPANY.

APPEAL FROM THE COURT OF CLAIMS.

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8665—04

1 In the Court of Claims.

THE HARVEY STEEL COMPANY
v.
THE UNITED STATES. } No. 21110.

Stipulation of parties, filed August 2, 1904.

It is hereby stipulated between the parties hereto that the requests for findings of fact made by the defendant in the Court of Claims, Nos. 7 and Nos. 11–30, both inclusive, which requests are referred to in the order of the Court of Claims, filed on February 29, 1904, amending findings of facts herein, and which requests through inadvertence were not incorporated in the printed transcript of record herein, be sent to the Supreme Court as a part of said transcript, a copy of said requests to be certified by the clerk of the Court of Claims to the Supreme Court as an additional transcript, and to be considered part of the transcript of record herein.

Dated, Washington, D. C., July 28, 1904.

UNITED STATES, *Appellant*,
By LOUIS A. PRADT, *Assistant Attorney-General*,
B.
HARVEY STEEL COMPANY,
By BOARDMAN, PLATT & SOLEY, *Attorneys*.

Order allowed.
[SEAL.] C. C. NOTT, *Chief Justice*.
August 5, 1904.

2 Court of Claims.

HARVEY STEEL COMPANY
vs.
THE UNITED STATES. } No. 21110.

No. 7 and Nos. 11 to 30, inclusive, of defendant's requests for findings of fact, filed December 20, 1902, in the above-entitled cause, as covered by the foregoing stipulation, to wit:

7. The said plates were treated in the following manner: The plates were manufactured of suitable dimensions and were of low steel—that is, of steel containing a comparatively small percentage of carbon. After such plates were manufactured, said plates were packed between a mass of carbonaceous material on the side intended to receive the impact of projectiles and a mass of noncarbonaceous material on the other side, within a heating chamber in a furnace. The furnace was then fired up and the heating chamber was maintained for a period of several days at a heat which was ordinarily above the actual melting point of some varieties of cast iron, after which the plates were allowed to cool and were removed from the furnace. The plates were then reforged, whereby they were rendered thinner and more compact. After the reforging the plates were again heated to about 1,350° F. and were "chilled" or "quenched" by spraying them with jets of cold water.

11. The essential features of the process described in United States patent 460262 and in Claim I of that patent are as follows:

1. Operating on a low steel plate.

2. Packing carbonaceous material on one side of the plate and noncarbonaceous material on the other.

3. Subjecting the plate so packed to a high heat.

4. Hardening the plate while it is cooling off after its subjection to said high temperature by spraying it with cold water.

3 12. There was neither novelty nor invention in any one of said steps, nor in the combination of them, at the time Mr. Harvey applied for patent 460262, nor at the time he claimed to have made the invention covered by said patent, unless the high heat mentioned in subdivision 3 of finding 11 was a heat above 3,100° F. If said patent prescribes the use of such heat, there was novelty and invention in that one step and in no other.

13. The melting point of cast iron is now known to vary from 1,880° F. to 2,282° F., according to variety.

14. The fact mentioned in finding 13 was not established until several years after United States patent 460262 was granted. At the time said patent was granted many authorities well recognized in the metallurgy of iron and steel maintained that the melting point of cast iron was sometimes as high as 2,920° F. A person skilled in the art at that time would have been perfectly justified in holding to said opinion.

15. For hundreds of years prior to the application for patent 460262 it was common knowledge in the art that iron or low steel would take up carbon if heated in contact with carbonaceous material. Such operations at various temperatures had been of the most common occurrence for at least a hundred years prior to said application, and the articles being carburized were often heated to 2,400° F., and even higher. Such facts were also frequently set forth in patents and publications.

16. For a long period prior to said application it was common knowledge in the art that parts of the material operated on could be protected from the carbon by packing noncarbonaceous material over such parts, and it had very commonly been practiced and described in patents and publications, and these descriptions show such an arrangement of the materials that of necessity the carbon was firmly pressed against the iron or steel.

17. The fact that the carbon penetrated gradually from the surface inward was a matter of common knowledge in the art for many years prior to said application, and such was always the result of such operations. This condition was always produced in the operation and mentioned, and it had been repeatedly observed, commented upon, and established by chemical analyses, and had been described in many patents and publications long prior to said application.

4 18. Knowledge of the fact that steel containing as much carbon as the carburized faces of the plates furnished for the "Kearsarge" and "Kentucky" could be hardened by quenching with cold water or otherwise was common for hundreds of years prior to the application for patent 460262. Such operations had been commonly practiced and described in publications and patents for many years.

19. Such processes of carburization had been commonly applied to iron and steel, and the product had been subsequently hardened by quenching. The articles operated upon were of various sizes and shapes. Carburization of steel masses by these methods had frequently extended to the depth of an inch or an inch and a half below the surface, and in that depth the diminution of carbon had been gradual from the surface inward, and such condition had been observed and described, and its desirability fully realized and described in publications and patents. Such products had been hardened by quenching as a common practice.

20. From 1870 to 1887, and later mint rolls were manufactured in Pittsburg, Pa., by the same process, in all its details, that was applied to the plates furnished for the "Kearsarge" and "Kentucky." The carburization extended three-fourths of an inch inward, and the decrease was gradual. The surface of the finished roll was glass hard, and the hardness gradually decreased from the surface inward. All the practice and results were of common knowledge, at that place and time, to those engaged in the art. The desirability of such carburization and hardening for withstanding the strains to which said rolls were to be subjected was well understood.

21. Hammer dies for use in steam hammers were manufactured with the same characteristics at the same place during the same time by the same process, and the carburization extended gradually to at least 1 inch below the surface. All these facts and the desirability of such conditions were fully known.

22. Large plates with the same characteristics as the mint rolls and hammer dies could have been made by the same process at the same place during the same time.

23. The process of carburizing and hardening applied to the plates for the "Kearsarge" and "Kentucky" was fully described in the British patent to Spencer, No. 4866 of 1879. That patent gave persons skilled in the art sufficient information to enable them to produce such armor plates.

24. The desirability of supercarburizing and hardening armor plates had been repeatedly suggested and advocated in various patents and publications prior to the Harvey patent, and the manner in which it could be accomplished was well known to those skilled in the art. Such process would have been the same as that applied to the plates for the "Kearsarge" and "Kentucky."

25. In considering the prior state of the art the following patents and publications were considered:

(Insert list of them.)

26. The melting point of copper is above the melting point of the more fusible kinds of cast iron.

27. The melting point of wrought iron is about 2,687° F.

28. In all carburizing operations the depth of carburization depends on the duration and degree of heat used. If either is increased, the carburization is extended, and if the degree be raised, it is hastened.

29. There was no novelty nor invention in the use of any particular carbonaceous material employed on the plates for the "Kearsarge" or the "Kentucky."

30. The temperature of an article being carburized within an air-tight case is much lower than the temperature of the heating chamber surrounding the case.

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WILLIAM H. BUTTON,
Special Attorney.

Filed December 20, 1902.
A true copy: Test. This 11th day of August, 1904.
[SEAL.] JOHN RANDOLPH,
Asst. Clerk Court of Claims.

6 Court of Claims.

HARVEY STEEL COMPANY
vs.
UNITED STATES. } No. 21110.

I, John Randolph, assistant clerk of the Court of Claims, hereby certify that the foregoing are true transcripts from the records filed in this court in the above-entitled cause, and that the same are certified by the order of said court to the Supreme Court of the United States as an additional transcript, and to be considered part of the transcript of record on appeal certified to said court May 23, 1904.

In testimony whereof I have hereunto set my hand and affixed the seal of said Court of Claims this 12th day of August, 1904.

[SEAL.] JOHN RANDOLPH,
Asst. Clerk Court of Claims.

7 Supreme Court of the United States, October term, 1904.

THE UNITED STATES, APPELLANT,
vs.
THE HARVEY STEEL COMPANY. } No. 275.

Stipulation.

It is hereby stipulated by counsel for the parties to the above-entitled cause that the foregoing additional transcript of the record therein, certified by the clerk of the Court of Claims, may be added to and constitute a part of the record on appeal to the Supreme Court of the United States.

HENRY M. HOYT,
Solicitor-General.

JAS. RUSSELL SOLEY,
Counsel for Appellee.

August 30, 1904.

(Indorsement on cover:) File No., 19373. Supreme Court of the United States. October term, 1904. Term No., 275. The United States, appellant, vs. The Harvey Steel Company. Stipulation of counsel and addition to record. Filed October 13th, 1904. File No., 19373.